



Citrus Health Response Program Update June 2010

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CHRP Working Group Responds to Citrus Black Spot

After the citrus canker eradication program ended in 2006, the Citrus Health Response Program (CHRP) was formed. Through shared resources of the USDA and FDACS, CHRP is designed to detect and mitigate the impact of serious citrus pests and diseases. CHRP has concentrated on grove survey and packing house inspections for citrus disease symptoms including citrus black spot, and as a result, inspects a large percentage of the Florida citrus crop annually. The isolated detection of citrus black spot earlier this year, while unfortunate, is a good indicator of the effectiveness of the early detection network within the program. More information on citrus black spot and what is being done to manage it is presented below.

To further the benefits of the CHRP program, a working group was formed in 2010. The initial meeting in May produced a comprehensive list of goals and action items. The current focus of the working group is on citrus black spot, and these specific issues related to citrus black spot have been identified:

- Immediate need for management recommendations and how they can be integrated into existing disease management programs.
- Eradication versus management issue will require additional information on disease distribution, tools and techniques available, and costs.
- What will the phytosanitary standards look like for citrus nursery stock and fresh fruit movement?
- Do sanitation / decontamination requirements need to be strengthened (e.g., tarping)?
- Evaluate the role of abandoned groves in citrus black spot epidemiology
- What will be the standards for development of regulated areas?

Regulatory, research and outreach subgroups were formed and the following action items emerged from the CHRP Working Group's discussions related to the above issues.

CHRP Subgroup Action Items	
Regulatory: <ul style="list-style-type: none"> ■ Conduct citrus nursery systems review to assess CBS introduction risk to current citrus nursery protection program through an adhoc regulatory / research group ■ Develop and implement a CBS symptom recognition training program for fruit graders at citrus processing plants (overarching with outreach) ■ Compile current phytosanitary regulations from other parts of the world where fresh fruit is being shipped from countries / areas where CBS is endemic ■ Develop a first-cut draft regulatory framework document for discussion that addresses intrastate and interstate movement of regulated articles from quarantine areas of Florida 	Status: <ul style="list-style-type: none"> ■ In progress ■ Completed ■ In progress ■ In progress
Research: <ul style="list-style-type: none"> ■ Develop and distribute CBS management guidelines to Florida citrus industry (overarching with outreach) ■ Develop a proposal to investigate CBS transmission via infected fruit that is destined for fresh fruit markets (similar to work done on citrus canker) ■ Develop and implement a CBS spore-trapping research project to determine effectiveness of this as a survey tool ■ Identify measures needed to contain / reduce CBS inoculum, including leaf litter and other regulated articles in transit; look at mechanisms to add to fruit trailers to make tarping easier and safer to accomplish 	Status: <ul style="list-style-type: none"> ■ In progress ■ In progress ■ In progress ■ In progress
Outreach: <ul style="list-style-type: none"> ■ Continue to develop and implement CBS information for outreach to specific target audiences (segments of citrus industry as well as the public) ■ Develop a CBS website with links to other related sites ■ Interface with research and regulatory subgroups to provide support for findings that emerge, and develop outreach activities to communicate findings where needed 	Status: <ul style="list-style-type: none"> ■ In progress ■ Complete/ongoing ■ In progress

Citrus Black Spot Found in Florida

Citrus black spot has long been on the radar of Florida agricultural officials because of its capacity to blemish fruit and reduce yield. This find marks the first report of this fungal pathogen in North America, and constitutes a major jump in the geographical range of the pathogen. Until this suspected discovery, the nearest known infections were in Argentina and Brazil.

During a routine survey requested by a grower in early March 2010, an inspector from the FDACS Division of Plant Industry's CHRP program collected a suspect sample of citrus black spot, *Guignardia citricarpa*, on Valencia oranges in a grove in Collier County. Initial laboratory analyses by FDACS/DPI confirmed the citrus black spot finding, and subsequent testing by the USDA at their Beltsville, Maryland laboratory provided the final confirmation.

Federal and state agriculture officials have joined forces to address the challenges this new citrus disease presents. Highlights of efforts to date include:

- Conducted delimiting surveys at 1, 2, 3, 5, and 7-mile arcs around the positive finds
- Conducted CBS identification training at citrus processing plants for graders
- Scheduled meeting in early June with affected growers to present a prescribed management plan
- Surveying other high-risk areas (in addition to ongoing CHRP surveys), including residential areas
- Conducted inspections of shipments received at packing houses and processing plants
- Surveyed all lemon groves in Florida because lemons are highly susceptible to citrus black spot
- USDA-APHIS has issued Emergency Action Notices (EAN) to six groves within the 1-mile arc around the initial detection area. EANs were also issued to the processing facilities that receive fruit from those groves. EANs specify the requirements for moving fruit, the decontamination treatment requirements for equipment, and how leaves and other plant debris remaining in trailers and field boxes are to be treated and destroyed
- Forensic investigation is underway in hope of determining the origin of the citrus black spot infection



Citrus Black Spot

Citrus black spot is a fungal disease marked by dark necrotic spots or blotches on the rinds of fruit, it produces early fruit drop, reduces crop yields, and if not controlled, renders the highly-blemished fruit unmarketable.

While all commercial citrus cultivars are susceptible to CBS, the most vulnerable are lemon and late-maturing citrus varieties like Valencia followed by grapefruit.

Although disease symptoms are expressed clearest on fruit, the risk of spreading this disease through fruit movement is minimal.

The greatest risk of disease transmission lies in the inoculum associated with fallen, decomposing citrus leaves. Spores are discharged into the air during onset of warm, wet weather, mostly during late spring and summer.

For more information on citrus black spot and the CHRP program visit www.fl-dpi.com.



Photos (left to right): survey view of CBS; close-up of virulent spot; hard spot; hard spot highly magnified